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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/905,483	07/12/2001	James M. Avery	SUN-P5493-MDF	3690

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EXAMINER

FAROOQ, MOHAMMAD O

ART UNIT PAPER NUMBER

2181

DATE MAILED: 11/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/905,483	Applicant(s) AVERY, JAMES M.	
	Examiner Mohammad O. Farooq	Art Unit 2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11-23 is/are rejected.
- 7) ☒ Claim(s) 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/22/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This patent application discloses subject matter that is related to the subject matter of a copending application. The applicant is required to update the status of the copending application to include U.S. Patent Serial Number.

Drawings

2. The corrected drawings were received on June 22, 2005. These drawings are substitute for figures 11 and 12 previously filed on July 21, 2001.

3. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Information Disclosure Statement

4. The information disclosure statement (IDS) submitted on June 22, 2005 was filed after the mailing date of the of non-final office action on April 5, 2005. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Objections

5. Claim 16 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Appropriate correction is therefore required.

Allowable Subject Matter

6. The indicated allowability of claims 1-14 and 19-23 is withdrawn in view of the newly discovered reference(s). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-3, 6-9, 11, 12 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art in view of Miyano et al. U.S. Pat. No. 6,327,540 B1

8. As to claim 1, applicant admitted prior art teaches method, comprising:

- a) receiving a first packet from the first data stream, the first packet containing a first packet ID and a first data payload (page 2, lines 13-19);
- b) receiving a second packet from the second data stream, the second packet containing a second packet ID and a second data payload (page 2, lines 13-19);
- c) a first portion of the first data indicating that the first packet ID is equal to the ID associated with a first of the plurality of the packet ID arrival registers, a second portion of the first data indicating that the first packet ID is not equal to the ID associated with the second of the plurality of the packet ID arrival registers (page 3, lines 4-11);

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d) a first portion of the second data indicating that the second packet ID is equal to the ID associated with the second of the plurality of the packet ID arrival registers, a second portion of the second data indicating that the second packet ID is not equal to the ID associated with the first of the plurality of the packet ID arrival registers (page 3, lines 4, 11).

However, applicant admitted prior art does not teach storing first and second data in the plurality of registers; first and second auto correlation vectors; and comparison of the magnitudes of the vectors, including the first packet in the third data stream. Miyano et al. teach storing first and second data in the plurality of registers (memory for storing time series data; col. 2, lines 44-51); and first and second auto correlation vectors; and comparison of the magnitudes of the vectors, including the first packet in the third data stream (col. 4, lines 20-29; col. 5, lines 13-30). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of applicant admitted prior art with Miyano et al. because that would provide detection of end point in a shorter time (col. 2, lines 23-31).

9. As to claims 2 and 3, applicant admitted prior art teaches first packet includes receiving the first packet from an HT I/O device and the act of receiving a second packet includes receiving the second packet from the HT I/O device (page 2, lines 13-19; page 3, lines 4-11).

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10. As to claims 6 and 7, applicant admitted prior art does not teach biased and unbiased autocorrelation vector. Miyano et al. teach biased and unbiased autocorrelation vector (variable Q1 and Q2; col. 13, lines 18-30). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of applicant admitted prior art and Miyano et al. because that would provide detection of end point in a shorter time (col. 2, lines 23-31).

11. As to claims 8 and 9, applicant admitted prior art teaches HyperTransport I/O device and HyperTransport I/O switch (page 2, lines 9-14).

However, applicant admitted prior art does not teach autocorrelation vector. Miyano et al. teach first autocorrelation vector (col. 4, lines 20-29). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of applicant admitted prior art with Miyano et al. because that would provide detection of end point in a shorter time (col. 2, lines 23-31).

12. As to claims 11 and 12, applicant admitted prior art teaches receiving first packet from a second HT I/O device and receiving the second packet includes receiving the second packet from a third HT I/O device (page 3, lines 4-11; fig. 2); and receiving first packet from internal port within the HT I/O device and receiving the second packet includes receiving the second packet from a second HT I/O device (internally generated packets; page 3, lines 12-15).

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13. As to claim 19, applicant admitted prior art teaches method, comprising:

- a) receiving a first packet from the first data stream, the first packet containing a first packet ID and a first data payload (page 2, lines 13-19);
- b) receiving a second packet from the second data stream, the second packet containing a second packet ID and a second data payload (page 2, lines 13-19);
- c) a first portion of the first data indicating that the first packet ID is equal to the ID associated with a first of the plurality of the plurality of registers, a second portion of the first data indicating that the first packet ID is not equal to the ID associated with the second of the plurality of the registers (page 3, lines 4-11);
- d) a first portion of the second data indicating that the second packet ID is equal to the ID associated with the second of the plurality of the packet ID arrival registers, a second portion of the second data indicating that the second packet ID is not equal to the ID associated with the first of the plurality of the registers (page 3, lines 4, 11).

However, applicant admitted prior art does not teach storing first and second data in the plurality of registers. Miyano et al. teach storing first and second data in the plurality of registers (memory for storing time series data; col. 2, lines 44-51). Therefore, it would have been obvious to one of ordinary skill in the art at the time invention to combine the applicant admitted prior art with Miyano et al. because that would provide means for calculating correlation between the first time series data with the second time series data (col. 2, lines 44-51).

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14. Claims 20 and 21 are similar in limitations as method claims 2 and 3. Applicant admitted prior art and Miyano et al. teach method as set forth in claims 2 and 3. Therefore, applicant admitted prior art and Miyano et al. also teach method as set forth in claims 20 and 21.

15. Claims 4, 5, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art in view of Miyano et al. U.S. Pat. No. 6,327,540 B1 further in view of Tamura et al. U.S. Pat. No. 5,359,720.

16. As to claims 4 and 5, neither applicant admitted prior art nor Miyano et al. teach storing a "1" in the first packet ID and storing a "0" in the second packet ID. Tamura et al. teach storing a "1" in the first packet ID and storing a "0" in the second packet ID (valid/invalid present bit or PB; col. 4, lines 50-67). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to modify the combination of applicant admitted prior art and Miyano et al. with Tamura et al. because that would provide performance of high-speed processing irrespective of an occurrence of hashed address conflict (col. 3, lines 48-59).

17. Claims 22 and 23 are similar in limitations as method claims 4 and 5. Applicant admitted prior art, Miyano et al.; and Tamura et al. in combination teach method as set forth in claims 4 and 5. Therefore, applicant admitted prior art Miyano et al. and Tamura et al. in combination also teach method as set forth in claims 22 and 23.

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18. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art in view of Miyano et al. U.S. Pat. No. 6,327,540 B1 further in view of Riggle et al. U.S. Pat. No. 5,588,030.

19. As to claims 13, neither applicant admitted prior art nor Miyano et al. teach autocorrelation vector includes the data in the first packet ID arrival register, shifting the copied data by T elements, where T is an integer, the result being referred to as shifted data. Riggle et al. teach autocorrelation vector includes the data in the first packet ID arrival register, shifting the copied data by T elements, where T is an integer, the result being referred to as shifted data (col. 5, lines 28-58). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the combination of applicant admitted prior art and Miyano et al. with Riggle et al. because that would provide synchronization of a system to accurately read and write data (col. 1, lines 10-16).

20. As to claim 14, applicant admitted prior art teaches multiplying the shifted data with the data in the first packet ID register (as multiplication is common in digital circuits and the term is well defined in common computer dictionaries).

21. Claims 15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Tamura et al. U.S. Pat. No. 5,359,720

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22. As to claim 15, applicants' admitted prior art teaches method, the method comprising:

- a) receiving, by the HT I/O device a first packet from a first data stream, the first packet containing a first data payload (prior art discussion in background; pages 2 and 3)
- b) receiving, by the HT I/O device, a second packet from the second data stream, the second packet containing a second data payload (prior art discussion in background; pages 2 and 3);
- c) storing, by the HT I/O device, the first packet in a first buffer (prior art discussion in background; pages 2 and 3); and
- d) storing, by the HT I/O device, the second packet in a second buffer (prior art discussion in background; pages 2 and 3).

However, applicant's prior art does not teach first and second packet ID associated with first and second buffer ID. Tamura et al. teach first and second packet ID associated with first and second buffer ID (i.e. check for match/mismatch for valid packet storage; abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of applicant's prior art and Tamura et al. because that would provide performance of high-speed processing irrespective of an occurrence of hashed address conflict (col. 3, lines 48-59).

23. As to claim 18, applicant's admitted prior art teaches storing the first packet in the first buffer (background, pages 2 and 3).

However, applicant's admitted prior art does not teach first packet associated with a buffer ID that is equal to the first packet ID. Tamura et al. teach first packet associated with a buffer ID that is equal to the first packet ID (abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of applicant's admitted prior art and Tamura et al. because that would provide performance of high-speed processing irrespective of an occurrence of hashed address conflict (col. 3, lines 48-59).

24. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Tamura et al. U.S. Pat. No. 5,359,720 further in view of Ereli et al. U.S. Pat. No. 5,778,342.

25. As to claims 16 and 17, neither applicant's admitted prior art nor Tamura et al. teach selecting first packet based upon the autocorrelation vector and passing the first packet to an output port.

Ereli et al. teach selecting first packet (i.e. frame) based upon the autocorrelation vector and passing the first packet to an output port (col. 8, line 66 – col. 9, line 5; col. 10, lines 26-32; item 56, fig. 3). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the combination of applicant's admitted prior art and Tamura et al. with Ereli et al. because that would provide selecting a match score which is best in accordance with a predetermined criterion (col. 3, lines 60-64).

Allowable Subject Matter

26. Claim 10 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

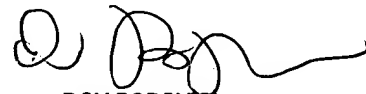
27. Applicant's arguments with respect to claims 15-18 have been considered but are moot in view of the new ground(s) of rejection.

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28. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad O. Farooq whose telephone number is (571) 272-4144. The examiner can normally be reached on 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici can be reached on (571) 272-4083. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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Mohammad O. Farooq
October 5, 2005